



QC ABSTRACT

NAME OF WORK: Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelehanka New Town Sub Division.

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
Materials						
1	Cement	Fineness by dry sieving	One Test		1	1
		Fineness by Air permeability method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
2	Coarse aggregate(40 mm down size)	Compressive Strength	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
3	Coarse aggregate(20 mm down size)	Water Absorption	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
4	Fine aggregate	Water Absorption	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Precast (100mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1
7	RCC(M20)	Compressive Strength(7days and 28days)	2 sets /6-15 cum	13.5	4	4
8	GSB	SIEVE ANALYSIS	One Test		1	1

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ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ ಅಧ್ಯಯನಕರರು
ಯುಜಿಎಸ್ ಸುಪರ್ನಗರ ಉಪವಿಭಾಗ.
ಕೆ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-108



9	WMM	Sieve Analysis	One Test	1	1
		Impact Value	One Test	1	1
		Flakiness Index	One Test	1	1
		Elongation Index	One Test	1	1
10	DBM	SIEVE ANALYSIS	One Test	1	1
		STRIPPING VALUE	One Test	1	1
		Flakiness Index	One Test	1	1
		Elongation Index	One Test	1	1
		IMPACT VALUE	One Test	1	1
		Specific gravity	One Test	1	1
		Water Absorption	One Test	1	1
		Marshal Stability	One Test	1	1
		Marshal flow	One Test	1	1
		Percent air Voids	One Test	1	1
		Percent Voids in mineral Aggregate	One Test	1	1
		Percent Voids filled with Bitumen	One Test	1	1
		Density	One Test	1	1
		Gradation	One Test	1	1
11	BC	SIEVE ANALYSIS	One Test	1	1
		STRIPPING VALUE	One Test	1	1
		Flakiness Index	One Test	1	1
		Elongation Index	One Test	1	1
		IMPACT VALUE	One Test	1	1
		Specific gravity	One Test	1	1
		Water Absorption	One Test	1	1
		Marshal Stability	One Test	1	1
		Marshal flow	One Test	1	1
		Percent air Voids	One Test	1	1
		Percent Voids in mineral	One Test	1	1
		Percent Voids filled with Bitumen	One Test	1	1
		Density	One Test	1	1
		Gradation	One Test	1	1
12	BITUMEN	Ductility	One Test	1	1
		Softening Point	One Test	1	1
		Penetration	One Test	1	1
		Flash Point	One Test	1	1
		Fire Point	One Test	1	1
13	TACK COAT	Rate of spread	One Test	1	1

9/11/20

ಇದರಲ್ಲಿ ಸಹಾಯಕ ನಿರ್ದೇಶಕರು
ಯಲಕಂಠ ಸಹನಗರ ಸಮಿತಿ,
ಇ.ನಿ.ಎಂ.ಕೆ. ಬೆಂಗಳೂರು-106



TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2023-05-19-23 Date: 05-01-23
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division,
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Improvements to roads and drain at Suggappa layout and surrounding
Agency : SRI SAMBASHIVA, No 04, 3rd main Road, Chamundeshwari L/O
Customer's Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 02-01-23
Sample Type : Birla Super 53grade
Reference to BIS codes : IS 269 2015 Ordinary Portland cement Specification ,
IS 4031 (Part 4,5) 1988
IS 4031 Part 1 (RA 2021) DETERMINATION OF FINENESS BY DRY SIEVING,
Clause 4.4
IS 4031 Part 2, (RA 2018) Determination of Fineness by Blaine Air Permeability
Method, Clause 5
IS 4031 Part 3, (RA 2019) Determination of Soundness, Clause 5, Clause 6
IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste,
Clause 5
IS 4031 Part 5, (RA 2019) Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11, (RA 2019) DETERMINATION OF DENSITY , Clause 6

Date of test : 03-01-23

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 269:2015
1	Fineness by dry sieving (%)	2.55	—
2	Fineness by Air permeability method ($m^2/kg, Min$)	287.5	225 m^2/kg , Min
3	Density (gm/cc)	3.12	—
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	155 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2mm	Not more than 10 mm

* The results obtained are satisfactory as per standard requirements

Note:

The results pertain to the samples received and tested.

All information furnished by Agency/Representative

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Samples will be disposed after 30 days from the date of issue of test certificate

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R. RUDRAPRASAD

Authorized Signatory
Technical Manager

ಕರ್ನಾಟಕ ರಾಜ್ಯ ಸರ್ಕಾರದ ಅಧೀನದಲ್ಲಿ
ಯಶಸ್ವಿ ಕೃಷಿ ಸಂಶೋಧನಾ ಕೇಂದ್ರ,
ಬಿ.ಎಂ.ಎ. ಬೆಂಗಳೂರು-106



AN ISO 9001 : 2008 COMPANY & ACCREDITED LABORATORY AS PER ISO/IEC 17025:2017
4, 7TH MAIN MALLESWARAM, BANGALORE -3

Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2023-05-19-23 Date: 31-01-23
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.
Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097
Customer's Reference : BBMP/EE/YNK D/EMPT-12/W.O/45/2022-23
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 02-01-23
Sample Type : Birla Super 53 grade
Reference to BIS codes : IS 269:2015 Ordinary Portland cement Specification, IS 4031 (Part 4,5):1988
IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 6, (RA 2019) Determination of Compressive Strength, Clause 6
Date of test : 03-01-23
Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Compressive Strength			
SL.No.	Physical properties	Results	Requirement as per IS 269:2015
1	3 Days	28.5N/mm ²	Not less than 27 N/mm ²
2	7 Days	39.0N/mm ²	Not less than 37 N/mm ²
3	28 Days	58.5N/mm ²	Not less than 53 N/mm ²

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ಯಲಹಂಕ ನ್ಯೂ ಟೌನ್ ಸಬ್ ಡಿವಿಷನ್
ಪಿ.ಓ.ಓ. ಬೆಂಗಳೂರು-100



FOR CIVIL Pro.
R. RUDRAPRASAD
Authorized Signatory
Technical Manager

TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2023-05-19-23 Date: 04-01-23

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.

Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097

Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 02-01-23

Sample Type/ Size : 20mm down size coarse aggregate

Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 .1963(Part - 1,3,4) RA2021
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties

Date of test : 02-01-23

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	255	255	5.1	94.9	90-100
3	10 mm	2789	3044	60.9	39.1	25-55
4	4.75 mm	1545	4589	91.8	8.2	0-10
5	Pan	411	5000	100	0	-

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9/01/23

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ಇ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106



TEST REPORT ON COARSE AGGREGATES

Lab ID

CP-2023-05-19-23

Date: 04-01-23

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	13.2	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.4	
3	Specific Gravity	2.65	—
4	Bulk Density(Loose) (Kg/l)	1.53	—
5	Bulk Density(Compacted) (Kg/l)	1.55	—
6	Water Absorption(%)	0.22	—
7	Aggregate crushing Value(%)	24.1	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	23.8	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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ಯಲಕಂಠ ಉಪನಿರ್ದೇಶಕರು.
ಇ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-೧೦



FOR CIVIL Pro.

R. Buckner

R RUDRAPRASAD

Authorized Signatory

Technical Manager



TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2023-05-19-23 Date: 04-01-23

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.

Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097

Customer's Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 02-01-23

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - I, 3) RA2021
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption

Date of test : 02-01-23

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	28	28	2.8	97.2	90-100	90-100	90-100	95-100
3	2.36 mm	52	80	8.0	92.0	60-95	75-100	85-100	95-100
4	1.18 mm	237	317	31.7	68.3	30-70	55-90	75-100	90-100
5	600 micron	210	527	52.7	47.3	15-34	35-59	60-79	80-100
6	300 micron	211	738	73.8	26.2	5-20	8-30	12-40	15-50
7	150 micron	182	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result : The tested Sample Conforms to Grading Zone II

Page 1/2

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ಉಪಯೋಗಕ್ಕಾಗಿ-108





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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Format No: CP/TF/01

TEST RESULTS OF STEEL

Lab ID : CP-2023-05-19-23 Date: 04-01-23

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.

Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097

Customer's Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 02-01-23

Sample Type : Sunvik

Reference to BIS codes : IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2019.

Date of test : 03-01-23

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm ²)	(N/mm ²)	(%)		
1	Sunvik	Fe500	8	0.391	512	652	20.0%	Satisfactory	Satisfactory
2	Sunvik	Fe500	10	0.616	528	672	20.0%	Satisfactory	Satisfactory
3	Sunvik	Fe500	12	0.888	544	668	20.0%	Satisfactory	Satisfactory

* The results obtained are satisfactory as per standard requirements.

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Samples will be disposed after 30 days from the date of issue of test certificate

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R. Rudraprasad

R RUDRAPRASAD
Authorized Signatory
Technical Manager

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ಯಲಹಂಕ ನಗರ ಪಂಚಾಯತ್, ಬೆಂಗಳೂರು-108
End of Report



TEST REPORT OF PRECAST COVER SLAB

Lab ID : CP-2023-05-19-23 Date: 13-01-23

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no.05 Yelahanka New Town Sub Division.

Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097

Customer's Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 09-01-23

Sample Type /Size : Precast Cover Slab (100mm thick)

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete

Date of test : 09/01/2023

Grade of Slab : M25

Sl. No.	Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
		(mm)	(mm)	(kg)	(Sq.mm)	(KN)	(N/mm ²)	(N/mm ²)	(N/mm ²)
1	Cover Slab-1	77.49	100.48	1.116	4715	126.5	26.8	25.0	31.2
2	Cover Slab-2	77.45	100.52	1.122	4710	129.9	27.6	25.6	32.1
3	Cover Slab-3	77.50	100.51	1.118	4716	125.3	26.6	24.7	30.9

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ಯುಪಕರಣ ಉಪನಿಗದಿ ಉಪವಿಭಾಗ:
ಐ.ಐ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-108



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R RUDRAPRASAD
Authorized Signatory
Technical Manager



TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2023-05-19-23 Date: 14/01/2023

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.

Agency : SRL SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097

Customer's Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 09-01-23

Customer ID : Drain Bottom Raft Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 14/01/2023

SL No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Bottom Raft Concrete	M20	07/01/2023	14/01/2023	151.04 X 151.24 X 150.27	22842	8.338	411.5	18.0	18.3
2	Drain Bottom Raft Concrete	M20	07/01/2023	14/01/2023	150.29 X 150.23 X 151.74	22579	8.343	408.7	18.1	
3	Drain Bottom Raft Concrete	M20	07/01/2023	14/01/2023	151.28 X 151.73 X 149.49	22953	8.740	432.2	18.8	

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End of Report
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R. Rudraprasad
Authorized Signatory
Technical Manager

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2023-05-19-23 Date: 04/02/2023

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.

Agency : SRL SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097

Customer's Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 09-01-23

Customer ID : Drain Bottom Raft Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete CL5

Date of test : 04/02/2023

SL. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm ²)	Average Compressive Strength (N/mm ²)
1	Drain Bottom Raft Concrete	M20	07/01/2023	04/02/2023	150.59 X 149.94 X 150.30	22579	9.012	530.9	23.5	23.4
2	Drain Bottom Raft Concrete	M20	07/01/2023	04/02/2023	149.25 X 151.95 X 150.55	22678	8.255	515.7	22.7	
3	Drain Bottom Raft Concrete	M20	07/01/2023	04/02/2023	150.94 X 151.78 X 150.21	22911	8.453	546.0	23.8	

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ಯಶಸ್ವಿ ಸಾಧನವಾಗಿ
೩೩.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-108



FOR CIVIL Pro.

R. Rudraprasad

R. RUDRAPRASAD

Authorized Signatory

Technical Manager



TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2023-05-19-23 Date: 05-01-23

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.

Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097

Customer's Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23

Source of Sample : Sample supplied by Agency

Sample condition : Satisfactory

Date of Receipt : 02-01-23

Sample Type : 40mm down size coarse aggregate

Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2021
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties

Date of test : 02-01-23

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken		15000		grams		
Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	318	318	2.1	97.9	90-100
3	20 mm	7440	7758	51.7	48.3	30-70
4	10 mm	5140	12898	86.0	14.0	10-35
5	4.75 mm	1720	14618	97.5	2.5	0-5
6	Pan	378	14996	100.0	0	---

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ಯಾವುದೇ ಮುದ್ರೆಗಳಿಲ್ಲದಿದ್ದರೆ, ಇದು ಸರಿಯಲ್ಲ.



TEST REPORT ON COARSE AGGREGATES

Lab ID

:

CP-2023-05-19-23

Date: 05-01-23

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	8.1	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	7.5	
3	Specific Gravity	2.61	—
4	Bulk Density(Loose) (Kg/l)	1.38	—
5	Bulk Density(Compacted) (Kg/l)	1.42	—
6	Water Absorption(%)	0.25	—

* The results obtained are satisfactory as per standard requirements.

Note:

The results pertain to the samples received and tested.

All information furnished by Agency/Representative

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Samples will be disposed after 30 days from the date of issue of test certificate

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ಯಲಕಂಠ ಉಪನಗರ, ಸುವರ್ಣಾಭಾರತಿ,
ಬಿ.ಎಂ.ಸಿ. ರೋಡ್, ಬೆಂಗಳೂರು-560002
Page 2/2
End of Report



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R. Rudraprasad
R RUDRAPRASAD
Authorized Signatory
Technical Manager



TESTS RESULTS ON STABILITY OF MIX

Lab ID : CP-RW-2023-05-19-23 Date: 26-01-23
 Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
 Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
 Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.
 Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanapura, BANGALORE-560097
 Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
 Source of Sample : Hot Mix Plant, Bangalore
 Sample Condition : Satisfactory
 Date of Receipt : 23-01-23
 Type of Mix : DBM (Dense Bituminous Macadam)
 Date of Test : 23-01-23

The results of the tests conducted on the Dense Bituminous Macadam mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.29	11.82	9KN(Min)
2	Marshal flow at 60°C, mm	3.54	3.87	2-4
3	Percent air Voids	4.56	4.17	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.54	14.76	13-15
5	Percent Voids filled with Bitumen(VFB %)	68.98	70.28	65-75
6	Density, g/cc	2.42	2.40	-

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.

All information Furnished by Agency/ Representative

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FOR CIVIL Pro.
 R. RUDRAPRASAD
 Authorized Signatory
 Technical Manager



TEST REPORT OF AGGREGATE IMPACT VALUE

IS: 2386 Part IV

Lab ID : CP-RW-2023-05-19-23 Date: 16-01-23

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.

Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097

Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 14-01-23

Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)

Date of Test : 14-01-23

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	300.2	300.2
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	73.9	74.0
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	225.9	225.8
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.4
5	Aggregate impact value	(B/A)*100	24.6	24.7
6	Aggregate impact value (Mean of two tests)	Percentage	24.6	

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested

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ಇ.ಐ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106



FOR CIVIL Pro.

R. RUDRAPRASAD
Authorized Signatory
Technical Manager



DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE (IS 2386 (Part 1) 1963 (RA 2007))

Lab ID : CP-RW-2023-05-19-23 Date: 16-01-23
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.
Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097
Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 14-01-23
Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test : 14-01-23

Index	Percentage of Flakiness and Elongation Index	Specified limits as per MORTH specification table 400-12
Flakiness Index	12.8%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.5%	
Combined Flakiness and Elongation Index for WMM	25.3%	

* The results obtained are satisfactory as per standard requirements.

Notes:-

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ಇ.ಐ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-108
End of Report



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R. Rudraprasad
R RUDRAPRASAD
Authorized Signatory
Technical Manager



TEST REPORT OF CEMENT CONCRETE CUBES

Date: 17/01/2023

Lab ID : CP-2023-05-19-23
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.
Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097
Customer's Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 12-01-23
Customer ID : Drain Side wall Concrete
Sample Type /Size : 150X150X150 mm
Sample grade/Age : M20 / 7 Days Compressive Strength
Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete C1.5

Date of test : 17/01/2023

SL. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Side wall Concrete	M20	10/01/2023	17/01/2023	149.19 X 151.94 X 149.50	22667	8.436	408.0	18.0	18.5
2	Drain Side wall Concrete	M20	10/01/2023	17/01/2023	150.73 X 149.14 X 150.76	22480	8.666	423.8	18.9	
3	Drain Side wall Concrete	M20	10/01/2023	17/01/2023	150.38 X 149.30 X 150.41	22453	8.871	419.3	18.7	

* The results obtained are satisfactory as per standard requirements

Note:

The results pertain to the samples received and tested
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CP-2023-05-19-23

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R. RUDRAPRASAD
Authorized Signatory
Technical Manager



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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2023-05-19-23 Date: 07/02/2023

Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.

Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097

Customer's Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 12-01-23

Customer ID : Drain Side wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 07/02/2023

SL No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm ²)	Average Compressive Strength (N/mm ²)
1	Drain Side wall Concrete	M20	10/01/2023	07/02/2023	149.81 X 149.03 X 151.44	22326	8.764	520.6	23.3	23.1
2	Drain Side wall Concrete	M20	10/01/2023	07/02/2023	149.44 X 150.61 X 150.76	22506	8.358	513.3	22.8	
3	Drain Side wall Concrete	M20	10/01/2023	07/02/2023	151.85 X 151.81 X 151.02	23051	8.256	536.7	23.3	

* The results obtained are satisfactory as per standard requirements.

Note:

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9/02/23

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ಯಶಸ್ವಿಯಾಗಿ ಪರಿಶೀಲಿಸಲಾಗಿದೆ.
R. RUDRAPRASAD
10/02/23



FOR CIVIL Pro.

R. RUDRAPRASAD
Authorized Signatory
Technical Manager

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
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4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST RESULTS OF GRADATION FOR GSB (IS 2386:(Part 1) 1963 (RA2011))

Lab ID : CP-RW-2023-05-19-23 Date: 14-01-23
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.
Agency : SRI. SAMBASHIVA, No.04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanapura, BANGALORE-560097
Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 12-01-23
Type of Mix : GSB (Granular Sub Base)
Date of Test : 12-01-23
Oven Dry Weight : 10000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec. Limit Vide Table 400.1 MORTH Specification
75	0	0	0	100	100
53	997	997	9.97	90.03	80-100
26.5	1685	2682	26.82	73.18	55-90
9.5	1292	3974	39.74	60.26	35-65
4.75	1490	5464	54.64	45.36	25-55
2.36	1764	7228	72.28	27.72	20-40
0.425	1666	8894	88.94	11.06	10-25
0.075	1106	10000	100.00	0.00	0-5

TESTS ON FILLER SCREEN MATERIALS

Sl no	Particulars	Test results	Spec.Limit Vide Table
1	Liquid Limit, %	21.33%	Maximum 25
2	Plasticity index, %	Non plastic	Maximum 6

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.

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Authorized Signatory
Technical Manager



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4, 7TH MAIN MALLESWARAM, BANGALORE -3

**TEST REPORT OF AGGREGATE STRIPPING VALUE OF ROAD AGGREGATE
(IS:6241)**

Lab ID : CP-RW-2023-05-19-23 Date: 26-01-23
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Improvements to roads and drain at Suggappa layout and surrounding area
in ward no:05 Yelahanka New Town Sub Division.
Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O
Doddabommasandra, Vidyanayapura, BANGALORE-560097
Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 23-01-23
Type of Mix : DBM(Dense Bituminous Macadam)
Date of Test : 23-01-23

Type of Binder : 60/70
% of Binder Used : 4.5%
Weight of Aggregate : 200.0 gm
Weight of Binder : 9 gm
Temperature of water bath : 40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.0	2.0	98.2	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.

All information Furnished by Agency/ Representative

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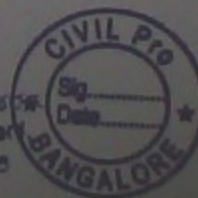
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ಬೆಂಗಳೂರು-560097
Date of Report



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R R DRAPRASAD
Authorized Signatory
Technical Manager



TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID : CP-RW-2023-05-19-23 Date: 31-01-23
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.
Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097
Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 28-01-23
Type of Mix : BC(Bitumenous Concrete)
Date of Test : 28-01-23

Type of Binder : 60/70
% of Binder Used : 5.4%
Weight of Aggregate : 200.0 gm
Weight of Binder : 10.8 gm
Temperature of water bath : 40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.5	1.5	98.3	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.

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ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-10



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R. Rudraprasad
Authorized Signatory
Technical Manager

PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID : CP-RW-2023-05-19-23 Date: 31-01-23
 Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
 Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
 Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.
 Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097
 Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
 Source of Sample : Sample supplied by Agency
 Sample Condition : Satisfactory
 Date of Receipt : 28-01-23
 Type of Mix : BC (Bituminous Concrete)
 Date of Test : 28-01-23

Table 500-16 : Physical Requirements for Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.4	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.8		
Strength	Aggregate Impact Value	22.1	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.68	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.21	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.

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 R RUDRAPRASAD
 Authorized Signatory
 Technical Manager

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AN ISO 9001 : 2008 COMPANY & ACCREDITED LABORATORY AS PER ISO/IEC 17025:2017

4, 7TH MAIN MALLESWARAM, BANGALORE -3

TESTS RESULTS ON STABILITY OF MIX

Lab ID : CP-RW-2023-05-19-23 Date: 31-01-23
 Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
 Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
 Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.
 Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanayapura, BANGALORE-560097
 Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
 Source of Sample : Hot Mix Plant, Bangalore
 Sample Condition : Satisfactory
 Date of Receipt : 28-01-23
 Type of Mix : BC (Bituminous Concrete)
 Date of Test : 28-01-23

The results of the tests conducted on the Bituminous Concrete mix sample are as follow				
Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.14	11.13	10KN(min)
2	Marshal flow at 60°C, mm	3.52	3.51	2-4
3	Percent air Voids	4.82	4.83	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.28	14.26	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.87	71.63	65-75
6	Density, g/cc	2.25	2.26	-

* The results obtained are satisfactory as per standard requirements.

Note:-

The results pertain to the samples received and tested.

All information Furnished by Agency/ Representative

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Samples will be disposed after 30 days from the date of issue of test certificate

16/01/23

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End of Report

ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ
ಯಲಹಂಕಾ ಉಪನಗರ ಸಂಪದಿಭಾಗ
೩೩,ಎಂ.ಓ. ಬೆಂಗಳೂರು-೧೦೮



FOR CIVIL Pro.
RUDRAPRASAD
Authorized Signatory
Technical Manager

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL



TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : CP-RW-2023-05-19-23 Date: 07-02-23
Customer : Assistant Executive Engineer, Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Address : Yelahanka Satellite Town Sub Division, BBMP, Bangalore.
Project Name : Improvements to roads and drain at Suggappa layout and surrounding area in ward no:05 Yelahanka New Town Sub Division.
Agency : SRI. SAMBASHIVA, No:04, 3rd main Road, Chamundeshwari L/O Doddabommasandra, Vidyanapura, BANGALORE-560097
Customer Reference : BBMP/EE/YNK.D/EMPT-12/W.O/45/2022-23
Source of Sample : Sample supplied by Agency
Date of Receipt : 06-02-23
Type of Mix : BC (Bituminous Concrete)
Date of Test : 06-02-23

SLno	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474.5	475
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	5.50	5.40
7	Average percentage	%	5.5	

(Signature)

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R. RUDRAPRASAD
Authorized Signatory
Technical Manager

Lab ID

: CP-RW-2023-05-19-23

Date: 07-02-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm)

: 474.5

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	13.9	86.1	70-88
4.75	112	178	37.5	62.5	53-71
2.36	88	266	56.1	43.9	42-58
1.18	29	295	62.2	37.8	34-48
0.6	11	306	64.5	35.5	26-38
0.3	46	352	74.2	25.8	18-28
0.15	45	397	83.7	16.3	12-20
0.075	55	452	95.3	4.7	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm)

: 475

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	13.9	86.1	70-88
4.75	112	178	37.5	62.5	53-71
2.36	88	266	56.0	44.0	42-58
1.18	29	295	62.1	37.9	34-48
0.6	11	306	64.4	35.6	26-38
0.3	46	352	74.1	25.9	18-28
0.15	45	397	83.6	16.4	12-20
0.075	55	452	95.2	4.8	4-10

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(Signature)

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End of Report



FOR CIVIL PRO.

R. RUDRAPRASAD
Authorized Signatory
Technical Manager

ಕರ್ನಾಟಕ ರಾಜ್ಯ ಸರ್ಕಾರ
ಯುರೋಪ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-108